

# Induction of anti-tumor CD8+ T cells and prominent infiltration of lymphocytes with a Th1 polarizing signature to pleural mesothelioma tumor after intratumoral injection of ONCOS-102

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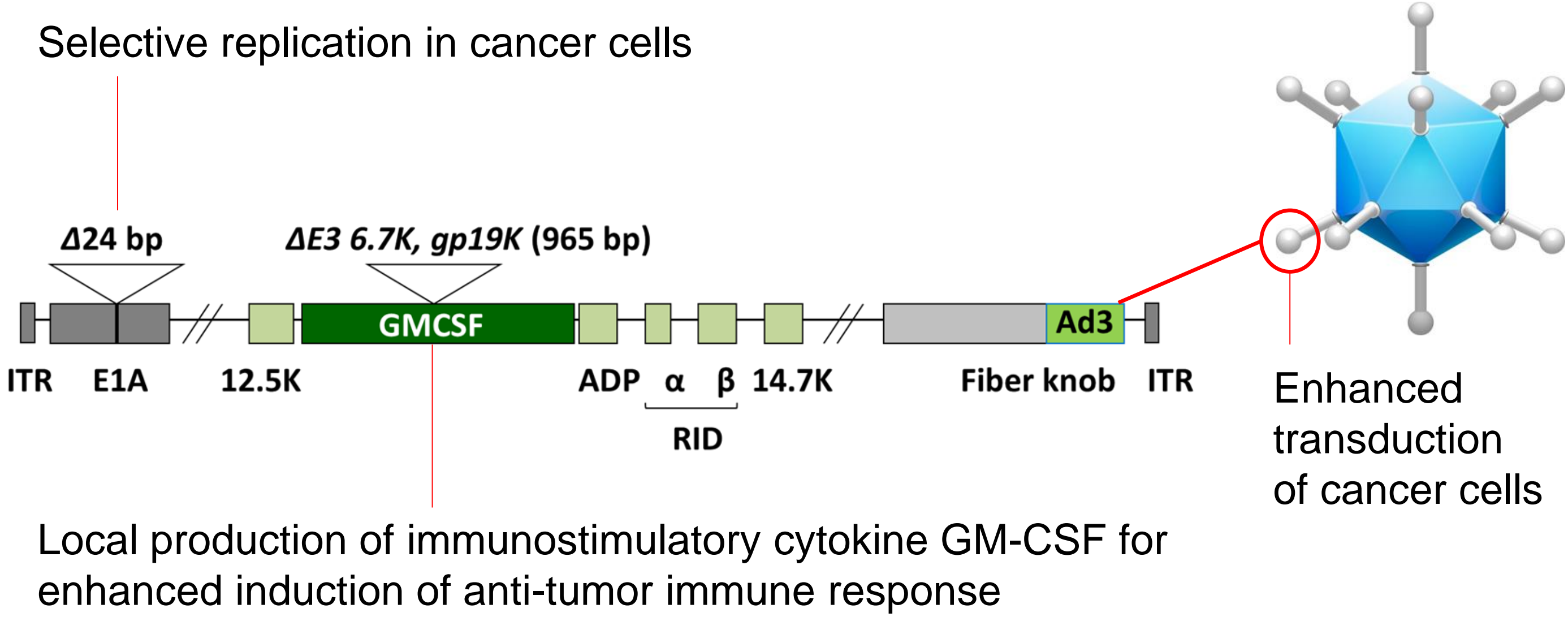
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## INTRODUCTION

Adenoviruses have a unique ability to prime and boost immune responses by causing immunogenic cancer cell death and subsequent release of tumor antigens for antigen presenting cells, resulting in the priming of potent tumor-specific immunity.

Safety, easy manipulation of the genetic backbone and possibility to produce the product easily in large scale make adenovirus an excellent therapeutic agent.

### ONCOS-102



## Phase I trial schedule and patient characteristics

Day	0	1	4	8	15	29	57	85	113	141	169
ONCOS-102	X	X	X	X	X	X	X	X	X	X	
Biopsy	X					X	X				
PET/CT	X							X		X	

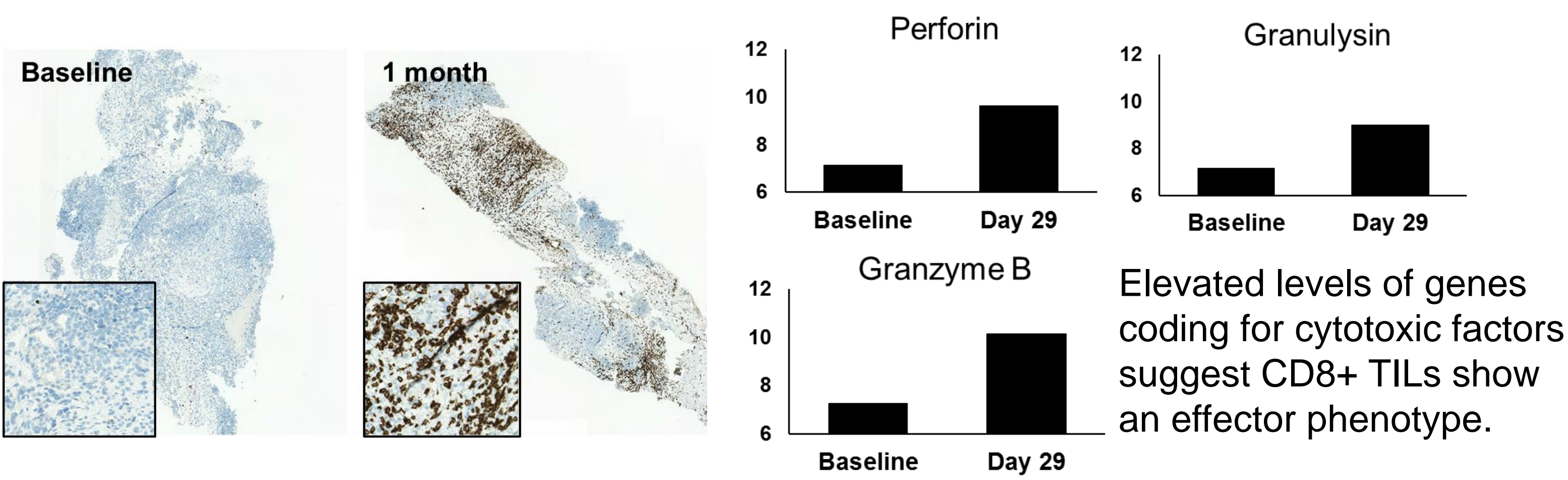
- 68-year-old male with asbestos-related pleural mesothelioma. T1/N0/M0 at diagnoses on 17 Aug 2011, disease progression despite two chemotherapies (Cisplatin/Pemetrexed and Docetaxel) and radiotherapy.

## RESULTS

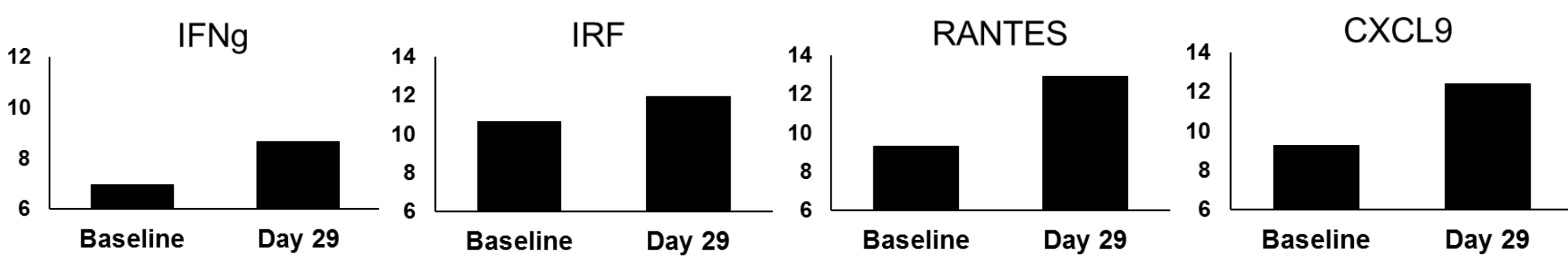
Local treatment with ONCOS-102:

- Induced a prominent infiltration of CD8+ T cells to tumor
- Induced systemic tumor-specific CD8+ T cell response
- Induced functional CD8+ T cells with effector phenotype
- Resulted in decrease in metabolic activity in PET scan 7.5 months after treatment initiation
- Safety with only gr 1-2 AEs with the exception of gr 3 fever

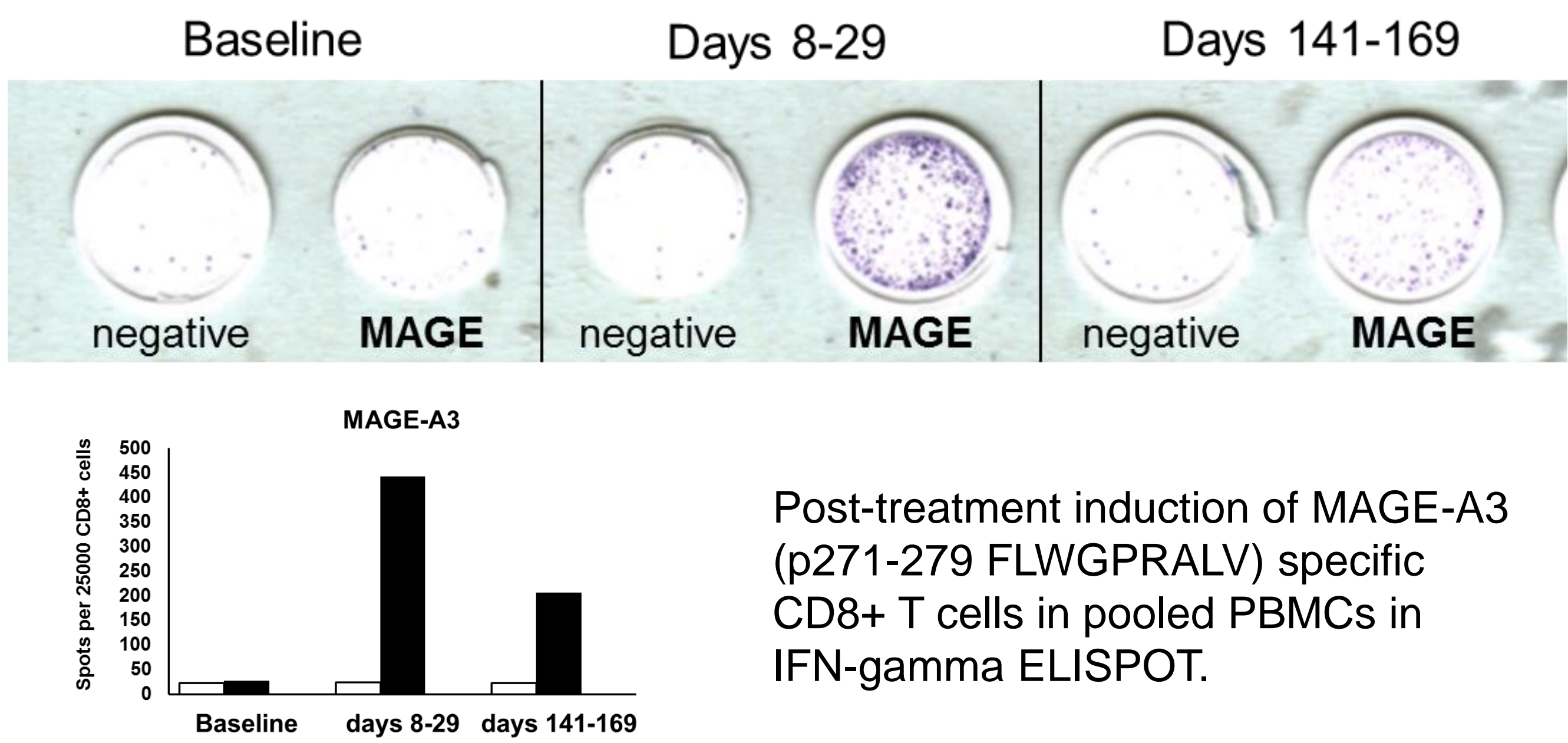
## Prominent infiltration of CD8+ T cells to tumor



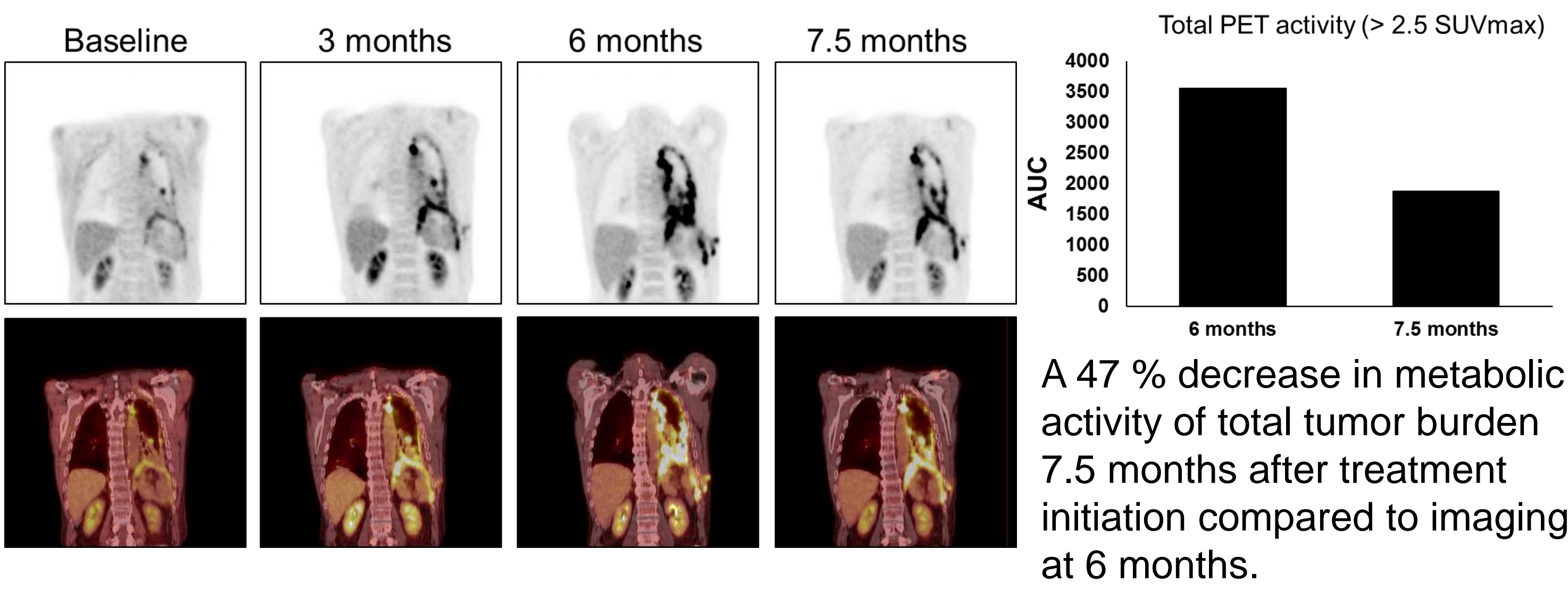
## CD8+ TILs show a Th1-type gene signature



## Systemic tumor-specific CD8+ T cell response



## Decrease in metabolic activity in PET



## CONCLUSIONS

**ONCOS-102 is:**

**Active immunotherapy**

- reverses tumor phenotype from T cell negative to T cell positive
- Induces TILs showing effector phenotype with Th1 type signature
- Elicits tumor-specific CD8+ T cell response

**Targeted immunotherapy**

- Patient specific, unique tumor epitopes targeted with one product

**Optimal for combination modalities**

- Potentially sensitizes tumors to other immunotherapies such as checkpoint modulators

